

WHAT IS CLAIMED IS:

1. A stairs lift system capable of converting stairs climbing (or descending) operation into a walking movement along a horizontal plane, the system comprising:
 - An existing substrate flight of stairs; and
 - a series of lifting elements, each supported on one of the substrate stairs, thus forming together a second, overlying layer of stairs, each lifting element comprises:
 - an open top container fitting the length, width and height of a substrate stair;
 - a top panel forming a cover for the container;
 - means for lifting the top panel up to the height of the next-in-line overlying stair;
 - means for activating the lifting means upon a control command;
 - means for sensing the presence of a subject having stepped on the first-in-line lifting element top panel;
 - means for issuing the control command to the next-in-line lifting element after the subject stepped thereover; and
 - means for lowering the top panel of the first-in-line lifting element to the initial position once the control command has been issued;

and so forth with respect to the remaining stairs of the flight.
2. The system as claimed in Claim 1 wherein the top panel is supported on a mechanical lifting system.
3. The system as claimed in Claim 2 wherein the mechanical lifting system comprises an electric motor driving a lazy-tongs system.

4. The system as claimed in Claim 2 wherein the mechanical lifting system comprises an electric motor driving a pulley block.
5. The system as claimed in Claim 1 wherein the top panel is supported on a hydraulic cylinder and piston assembly operatively coupled to an electrically operated hydraulic pump.
6. The system as claimed in Claim 1 wherein the subject presence sensing means comprise at least one microswitch-operating pad.
7. The system as claimed in Claim 6 wherein a pair of said pads are installed, one for each foot of the user.
8. The system as claimed in Claim 1 wherein the subject presence sensing means comprises a press-gauge device adapted to be activated by the weight of the subject.
9. The system as claimed in Claim 8 further comprising means for disabling the issuance of the control command subject to the transition of said weight to the next-in-line lifting element.
10. A method of converting stairs climbing (or descending) operation into a walking movement along a horizontal plane comprising the steps of sequentially lifting a stair occupied by the user to the level of the next-in-line stair, thus enabling the user to walk over to such next-in-line stair, and thereafter lowering the previously occupied stair back to the initial level thereof.
11. The method as claimed in Claim 10 further comprising laying a series of stair-like lifting elements over each existing stair and providing each element with lifting and lowering means.

12. The method as claimed in Claim 11 wherein the lifting and lowering means comprise an electric motor coupled to a lifting system.
13. The method as claimed in Claim 12 wherein the lifting operation of the electric motor is controlled by sensing means installed on a top surface of the lifting element, responsive to the presence of a user thereon, and the lowering operation of the motor is controlled by sensing means associated with the next-in-line lifting element responsive to the presence of a user thereon.
14. The method as claimed in Claim 13 wherein the sensing means are activated by the load of the user when stepping on the responsive lifting element.
15. The method as claimed in Claim 14 wherein the sensing means comprise a microswitch pad.
16. The method as claimed in Claim 13 wherein the sensing means comprise a press-gauge.
17. The method as claimed in Claim 12 wherein the lifting system is mechanical.
18. The method as claimed in Claim 12 wherein the lifting system is hydraulic.